



International Civil Aviation Organization

**MIDANPIRG Meteorology Sub-Group  
Sixth Meeting (MET SG/6)**

*(Cairo, Egypt, 1-3 March 2016)*

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**Agenda Item 3: Global/Regional developments related to MET**

OUTCOMES of the MET PANEL and its WORKING GROUPS

*(Presented by the Secretariat)*

**SUMMARY**

A summary of the First Meeting of the MET Panel (METP/1), held in Montréal from 20 to 24 April 2015 is provided in this paper. In addition, outcomes from the Working Groups of the MET Panel are provided.

**1. INTRODUCTION**

1.1 The meeting may note that the First Meeting of the Meteorology Panel (METP/1) was held in Montreal from 20 to 24 April 2015. One of the main functions of the panel was a review of the twenty-nine recommendations derived from the Meteorology Divisional Meeting (7-18 July 2014, Montréal) and in many cases developed a job card that was assigned to a specific panel or group. A job card was proposed for, “*those substantial tasks that would require input from experts, either relating singly to aeronautical meteorology or relating to multiple disciplines where other ICAO panels would need to be involved. Secondly, there were a number of tasks that could be carried out without the need for direct input from the panel other than to note and approve the resulting provisions, as necessary. These tasks were either already completed or allocated to the Secretariat of either ICAO or WMO. Finally, a small number of tasks were identified as underlying principles that while they should be borne in mind throughout the work of the METG they would not be expected to directly require a job card.*”

**2. DISCUSSION**

2.1 The METP/1 agreed to the following set of job cards:

- a) testing of the ATS message handling system (AMHS) in relation to the exchange of digital aeronautical meteorological information;
- b) development of MET-specific module related to Block 2 and detailing of the MET-specific module related to Block 1 of the ASBU methodology to cover meteorological information to support ATM in the terminal area;
- c) aeronautical meteorological information to support ATM operations from gate to gate;
- d) further development of the International Airways Volcano Watch (IAVW);

- e) inclusion of aeronautical meteorological information in the SWIM-enabled environment and further development of the SWIM concept relating to meteorology;
- f) reorganization of provisions relating to aeronautical meteorology;
- g) further development of provisions for information on the release of radioactive material into the atmosphere;
- h) implementation of a regional advisory system for select en-route hazardous meteorological conditions;
- i) further development of the satellite distribution system for information relating to air navigation (SADIS) and the Internet-based services;
- j) development of provisions for information on space weather to international air navigation;
- k) further development of the World Area Forecast System (WAFS); and
- l) development of cost-recovery implementation guidance and governance considerations.

2.2 The job cards are provided in section 1.2.2 of the METP/1 Report Folder that can be accessed at <http://www.icao.int/airnavigation/METP/MeetingDocs/METP-1/Report/Final%20report.pdf>.

2.3 These job cards would be assigned to one of the following working groups:

- a) ICAO Meteorology Panel Working Group on Meteorological Requirements and Integration (WG-MRI);
- b) ICAO Meteorology Panel Working Group on Meteorological Information and Service Development (WG-MISD);
- c) ICAO Meteorology Panel Working Group on Meteorological Information Exchange (WG-MIE); and
- d) ICAO Meteorology Panel Working Group on Meteorological Operations Groups (WG-MOG).

2.4 More details such as a summary of description of the group, their membership and initial work plans can be found at the above URL.

2.5 In general, the WG-MRI address the following topics:

- Development of a MET-specific module related to Block 2 and detailing of the MET-specific module related to Block 1 of the ASBU methodology to cover meteorological information to support ATM in the terminal area
- Aeronautical meteorological information to support ATM operations from gate to gate
- Reorganization of provisions relating to aeronautical meteorology

- The first meeting of the WG-MRI was held from 3 to 6 November 2015 in Montréal. Significant outcomes will be provided if the WG-MRI Report is posted on the ICAO Portal before the MID MET SG/6 Meeting.

Potential impacts to MET SG include:

- ***Establishment of MID MET/ATM TF in late 2016 to address regional implementation of provisions (Annex 3, PANS-MET) for MET support to selected ASBU Block 1 modules (e.g. support to trajectory based operations, terminal area operations) that would become applicable in 2018.***

2.6

The WG-MISD will address the following topics:

- Further development of the International Airways Volcano Watch (IAVW)
- Further development of provisions for information on the release of radioactive material into the atmosphere
- Implementation of regional advisory system for select en-route hazardous meteorological conditions
- Development of provisions for information on space weather to international air navigation
- Further development of the World Area Forecast System
- The first meeting of the WG-MISD was held from 2 to 6 November 2015 in Montréal. Significant outcomes will be provided if the WG-MISD Report is posted on the ICAO Portal before the MID MET SG/6 Meeting.

Potential impacts to MET SG include:

- ***Monitor developments associated with provisions for information on the release of radioactive material into the atmosphere.***
- ***Monitor developments associated with Regional Hazardous Weather Advisory Centres, and where applicable, an implementation strategy needed by MIDANPIRG in 2019 for 2020 applicability date.***
- ***Monitor developments associated with space weather information and space weather selection criteria. An implementation strategy is needed by MIDANPIRG in 2016 or 2017 for 2018 applicability date.***
- ***Monitor developments associated with volcanic ash information in ASBU Block 1 (2018-2023).***
- ***Monitor developments associated with World Area Forecast System in ASBU Block 1 (2018-2023).***

2.7

The WG-MIE will address the following topics:

- Testing of the ATS message handling system (AMHS) in relation to the exchange of digital aeronautical meteorological information

- Inclusion of aeronautical meteorological information in the SWIM-enabled environment and further development of the SWIM concept relating to meteorology
- The first meeting of WG-MIE was held in Montréal from 16 to 20 November 2015. Significant outcomes included:
  - a plan for MET into SWIM needs to be developed in the near term;
  - add a requirement in Annex 3 for States to limit access to IWXXM to approved aviation users;
    - there may be copyright and redistribution issues and a need to clearly identify who can use the data
  - to recommend to the METP that for changes requiring modification of IWXXM, the minimum time between approval of an Amendment to Annex 3 and the implementation of the XML component should be at least 18 months;
  - IWXXM should support the inclusion of extensions;
    - additional optional parameters be allowed in IWXXM and these should be defined in the WMO Codes Handbook (rather than Annex 3);
      - WMO will establish the mechanism but not the content (IWXXM 2.0);
    - extensions should consider, in part, the current additional content (i.e. the Remarks section) appended to TAC;
  - TAC will be frozen except for extraordinary situations;
    - TAC will continue beyond 2018;
  - users should not convert from IWXXM to TAC;
    - if users require TAC they should source/use the original TAC messages;
  - IWXXM should not be used to recreate or convert to TAC;
  - observations should be fed directly to IWXXM rather than be converted from text;
  - space weather (2018) should be added to IWXXM;
  - AIXM, FIXM and IWXXM need to be aligned as much as possible;
  - missing observations should be handled in IWXXM;
  - resolution and units of measurements need to be considered;
  - IWXXM should support a SIGMET for UIR;
  - WAFS SIGWX charts (possibly including low-level) in IWXXM to be considered;
  - until long term governance is established with ICAO that governance should remain with the WMO;
  - endorsed the need for flags such as test identifiers within IWXXM;
  - a validation schema for IWXXM is needed;
  - a trial SADIS web service for IWXXM compliant data will be developed; and
  - a manual update of OPMET databases was expected no later than the end of 2015.

Potential impacts to MET SG include:

- *Monitor developments related to testing of the ATS message handling system (AMHS) in relation to the exchange of digital aeronautical meteorological information (global OPMET information and WAFS forecasts). Results may have an impact on implementation and these results may be considered at the proposed workshop on IWXXM for implementation by ROC Jeddah and backup ROC Bahrain in 2016 as well as the proposed inter-regional workshop, Service Improvement through integration of Digital AIM, MET and ATM information in 2017.*

- ***Monitor developments related to MET-in-SWIM (mainly 2018 and beyond)***

2.8

The WG-MOG will address the following topics:

- SADIS/WIFS related work
- WAFS issues
- IAVWOPSG tasks
- The first meeting of the WG-MOG was held in Gatwick from 8 to 11 September 2015. Significant outcomes included:
  - WAFCs prepare information on the SIGWX correction process and deliver to the Secretariat for posting on the MOG web site (end of Oct 2015);
  - Effort being made to provide more EDR data that would assist in turbulence forecasts. WAFCs to provide information on potential benefits in this regard;
  - The WAFCs include key verification statistics in future WAFS Management Reports;
  - The WAFCs prepare a working paper on the future provision of SIGWX in digital form at the MIE meeting (November 2015) with an IP for MISD;
  - The WAFS Provider States provide additional levels as specified in the MET/14 Divisional Meeting
    - WAFCs consider how to make preview data available in advance of the implementation date Amendment 77 to Annex 3
    - The data be made available via SADIS and via WIFS on xx November 2016 effective with the 1200 UTC dataset
  - The WAFS Providers, make available on the ICAO METP MOG website, source data and generic visualisations of WAFS gridded forecasts of cumulonimbus cloud, icing and turbulence;
  - The WAFS Providers present WAFS Medium Level Strategy WAFS for ASBU Block 1 (2018-2023) to METP WG-MISD and WG-MRI for their consideration;
    - This includes higher horizontal (0.25 x 0.25 degree), temporal (every three hours to T+6 and from T+36 to T+72 and every hour from T+6 to T+36) and vertical (every thousand feet from SFC to FL600) resolutions of WAFS data; and
  - Updated guidance on the Use of WAFS Grids for Cumulonimbus Cloud, Icing and Turbulence Forecast

Potential impacts to MET SG include:

- ***Assure SADIS 2G users acquire Secure SADIS FTP before termination of SADIS Satellite Broadcast (31 July 2016).***
- ***Monitor feasibility study on making area forecasts for low-level flights issued in graphical form available on Secure SADIS FTP as this may impact exchange of information in this regard by States (2015-2016).***
- ***Monitor developments related to IAVWOPSG tasks still open (e.g. improving dissemination of aircraft reports on volcanic ash to VAACs that could be included in regional guidance material). (2015-2016).***

2.9 Furthermore, the Air Navigation Commission (ANC) at the 9<sup>th</sup> Meeting of its 199<sup>th</sup> Session held on 17 June 2015 approved the disbandment of the Aerodrome Meteorological Observation and Forecast Study Group (AMOFSG), Meteorological Warnings Study Group (METWSG), World Area Forecast System Operations Group (WAFSOPSG) and the International Airways Volcano Watch Operations Group (IAVWOPSG). The ANC also recommended that the ICAO Council disband the Satellite Distribution System Operations Group (SADISOPSG). The job cards by the METP/1 were approved noting some job cards were amended as per the discussions in the AN Min. 199-9. Lastly, the ANC requested METP address the tasks arising from the EANPG/56 report (Conclusions 56/13, 56/15, 56/16 and 56/18).

2.10 A summary of METP/1 and its working groups was provided. How these groups may impact MET SG was also provided and summarised in **Attachment A**.

### **3. ACTION BY THE MEETING**

3.1 The meeting is invited to note the information in this paper.

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ATTACHMENT A

Parent Group	Task	Who	When
<b>WG-MRI</b>	Establish MID MET/ATM TF to address regional implementation of provisions (Annex 3, PANS-MET) for MET support to selected ASBU Block 1 modules (e.g. support to trajectory based operations, terminal area operations) that would become applicable in 2018.	MSG	Late 2016
<b>WG-MISD</b>	Monitor developments associated with provisions for information on the release of radioactive material into the atmosphere.	MET SG	July 2015
	Monitor developments associated with Regional Hazardous Weather Advisory Centres, and where applicable, an implementation strategy needed by MIDANPIRG in 2019 for 2020 applicability date.	MET SG, MSG, MIDANPIRG	2018-2019
	Monitor developments associated with space weather information and space weather selection criteria. An implementation strategy needed by MIDANPIRG in 2016 or 2017 is needed for 2018 applicability date.	MET SG, MSG, MIDANPIRG	2016-2017
	Monitor developments associated with volcanic ash information in ASBU Block 1 (2018-2023).	MET SG	2018
	Monitor developments associated with World Area Forecast System in ASBU Block 1 (2018-2023).	MET SG	2018
<b>WG-MIE</b>	Monitor developments related to testing of the ATS message handling system (AMHS) in relation to the exchange of digital aeronautical meteorological information (global OPMET information and WAFS forecasts). Results may have an impact on implementation and these results may be considered at the proposed workshop on IWXXM for implementation by ROCs in 2016 as well as the proposed inter-regional workshop, Service Improvement through integration of Digital AIM, MET and ATM information in 2017.	BMG, MET SG in coordination with appropriate CNS group	2016-2017
	Monitor developments related to MET-in-SWIM	MET SG in coordination with appropriate CNS group	2018+

<b>WG-MOG</b>	Assure SADIS 2G users acquire Secure SADIS FTP before termination of SADIS Satellite Broadcast in July 2016.	MET SG	April 2016
	Monitor feasibility study on making area forecasts for low-level flights issued in graphical form available on Secure SADIS FTP as this may impact exchange of information in this regard by States.	BMG, MET SG	2015-2016
	Monitor developments related to IAVWOPSG tasks still open (e.g. improving dissemination of aircraft reports on volcanic ash to VAACs that could be included in regional guidance material).	BMG, MET SG	2015-2016

- END -